



**(S) DSD Delves into Reverse Engineering**

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*An NSA'er and her Australian colleagues create a reverse engineering office at DSD. (S)*

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(C) In June 2002 my family arrived in Canberra, Australia, for a 3-year tour when my husband was assigned as a cryptologic mathematician in DSD's Exploitation Group. Because of my background as a mathematician in S31225 I was assigned to DSD's Close Access Technologies team.

(TS//SI) Working with my DSD colleagues, we realized that the reverse engineering skills I brought from S31225 provided DSD with capabilities they had not previously considered as an area for development. We focused initially on reestablishing reading of a VSAT network which had not been accessible since early 2001. This new access allowed DSD reporters to issue SIGINT product that met high-priority needs of their Australian customers. In addition, this technical breakthrough demonstrated the need for DSD to formally establish a reverse engineering capability, something they had not thought of previously.

(TS//SI) The success of the reverse engineering effort on the VSAT network led DSD to formally establish an office to do reverse engineering. Because of my background I was asked to help establish the office, define the equipment and facility needs, draw up training requirements, construct interview questions for prospective employees, etc. Once the DSD reverse engineering effort is in place, there is great potential to benefit U.S. efforts to acquire equipment for reverse engineering as Australia's lower profile and accesses in this region of the world will benefit our needs. Reverse engineering done by DSD may also provide insights into equipment used by other targets of the 5-eyes SIGINT community.

(U) We have enjoyed our tour in Australia and will miss the relaxed atmosphere, great mates, touring Tasmania and other exotic sights, searching for "Big" attractions, and the unusual wildlife -- especially the birds -- when we return to Maryland in July.

(S) I feel fortunate to have played a role in establishing DSD's reverse engineering effort. My experience demonstrates one of the biggest benefits of a tour at DSD. Given the small numbers of staff, I was able to have a significant impact on the DSD mission.



*(U//FOUO) DSD building in Canberra*

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